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# Scabies Management

Los Angeles County  
Department of Public Health



# What is Scabies?

- Scabies is an infection of the skin caused by the human itch mite, *Sarcoptes scabiei*



[http://www.dpd.cdc.gov/dpdx/HTML/ImageLibrary/Scabies\\_il.htm](http://www.dpd.cdc.gov/dpdx/HTML/ImageLibrary/Scabies_il.htm)



[http://www.dpd.cdc.gov/dpdx/HTML/ImageLibrary/Scabies\\_il.htm](http://www.dpd.cdc.gov/dpdx/HTML/ImageLibrary/Scabies_il.htm)



# Types of Scabies

- Typical (Conventional): Patients usually have only 10-15 live adult females on the body at any given time
- Atypical (Crusted, formerly known as Norwegian): Heavy infestation with hundreds to thousands of mites. Caused when treatment & diagnosis is delayed. Highly communicable!

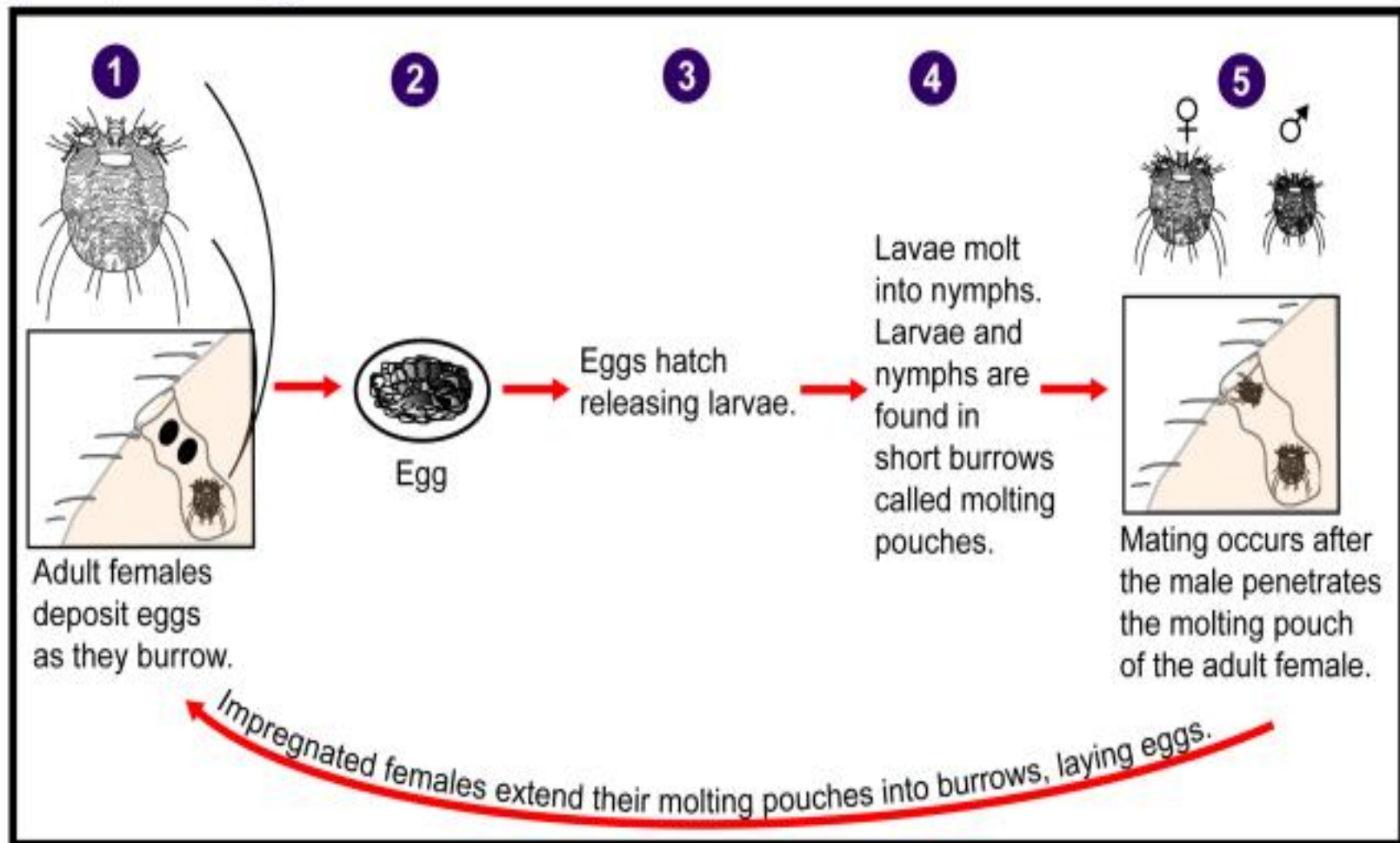


# The Life Cycle of Scabies

1. Adult pregnant female mite transfers to the skin of an un-infested person
2. Mite travels the skin surface at rate of 1"/min seeking a burrow site. It deposits 2-3 eggs daily
3. Egg→ larva→ nymph→ adults in 10-17 days
4. The adults migrate to the skin surface and mate. The male dies quickly & female penetrates the skin to repeat the cycle



# The Life Cycle of Scabies (2)



# Scabies Facts

- On the body, a scabies mite can live up to 4-6 weeks
- Once away from the human body, mites do not survive more than 48 – 72 hours
- Scabies cannot jump
- Visible by magnifying glass & microscope





# How is Scabies Spread?

- By direct, prolonged, skin-to-skin contact with a person infested with scabies (ex. bathing, back rubs, & applying lotion)
- By indirect contact, sharing clothing, towels, and bedding



# Incubation Period

When do first symptoms appear?

- Symptoms may appear 4-6 weeks after exposure to an infested person or environmental contacts (clothing, bedding, etc.) in primary infestation
- If previously infested with scabies or following exposure to Atypical scabies, symptoms may appear within 1-4 days





# Scabies Symptoms

- Rash (small red bumps)
- Papules (pimple-like rash)
- Vesicle (blister-like rash)
- Intense itching, especially at night and over most of the body
- Rash & itching are caused by a hypersensitivity reaction (allergic response) to the mite, eggs, & feces
- Burrows/tunnels (may look brown or black)
- Track marks (thin thread-like lines)



# Scabies Symptoms (2)

- Scaly skin (flakes)
- Chafed skin (irritation caused by friction)
- Swollen skin
- Crusty (scabs) or toughened skin
- Sores on the body caused by scratching
- Secondary bacterial infections or scarring caused by scratching

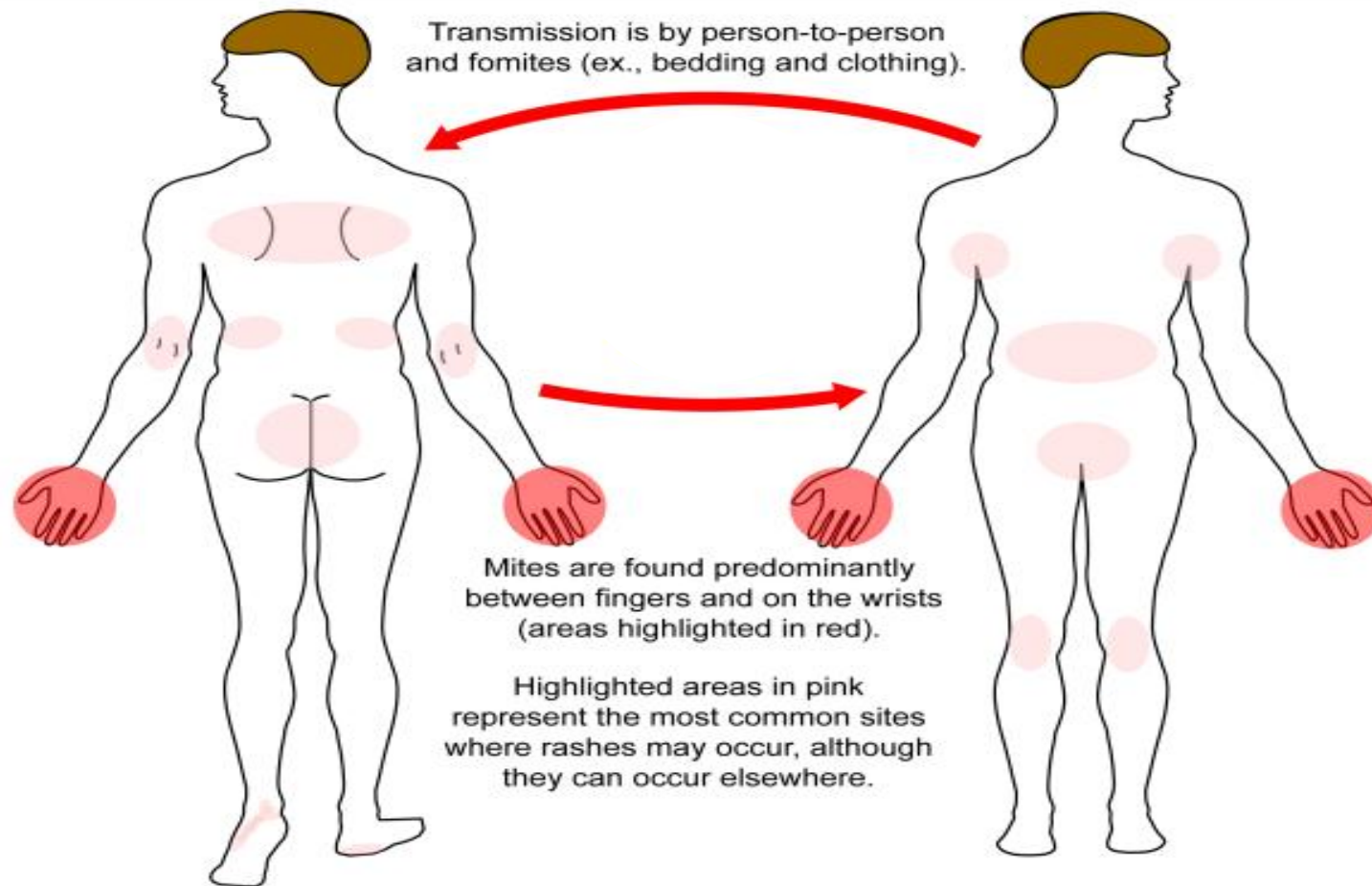


# Common Infection Sites

- Wrists
- Finger webs
- Elbows
- Skin folds
- Under breasts
- Waistline
- Lower abdomen
- Genitals
- Buttocks



# Skin Assessment



# Typical Scabies Infestation



Hand







<http://www.lib.uiowa.edu/HARDIN/MD/cdc/scabies.html>

# Hand



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# Finger webs



## Wrist





Arm pit

<http://www.dermnet.com/Scabies/picture/13248>



Wrist

[www.dermnetnz.org/arthropods/scabies.html](http://www.dermnetnz.org/arthropods/scabies.html)[www.dermnetnz.org](http://www.dermnetnz.org)







<http://www.dermnet.com/Scabies/picture/13250>

# Buttocks



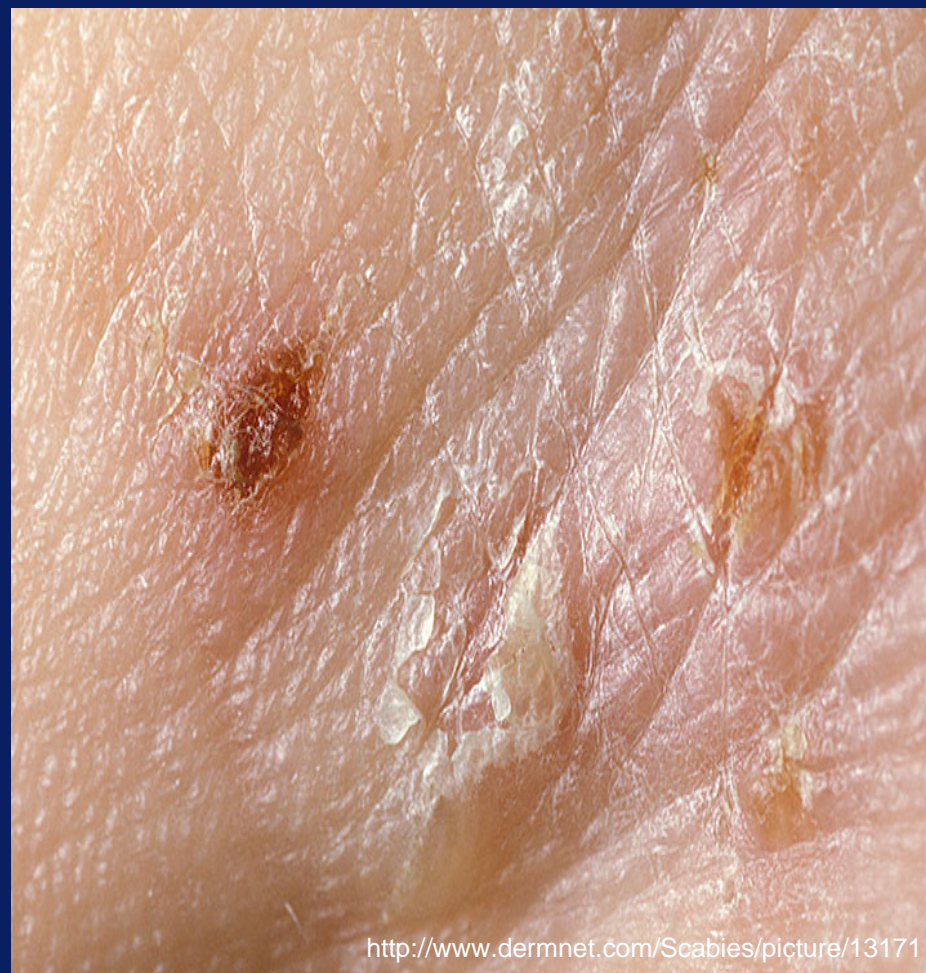




<http://www.dermnet.com/Scabies/picture/13164>

## Track marks

## Burrows



<http://www.dermnet.com/Scabies/picture/13171>





## Scrotum



## Back



# Atypical Scabies (Crusted)



Mandell GL, Bennett JE, Dolin R. (2005) Principals and practice of infectious disease. Sixth Edition.





# Diagnosis of Scabies

- Often misdiagnosed
- Clinical evaluation: Clinical signs and symptoms
- Skin scraping: Microscopic demonstration of the mite, ova, or fecal matter obtained from a skin scraping
- A negative skin scraping from does not rule out scabies infestation



# Who should be treated for Scabies?

- Anyone diagnosed with scabies
- Persons who have close, prolonged contact with the infested person should also be treated:
  - Patients
  - Household members
  - Employees
  - Co-workers
  - Sexual partners
  - Friends
- Everyone should receive treatment at the same time to prevent re-infestation



# Scabies Treatment Options

- Topical Scabicide (most frequent)
  - 5% Permethrin cream (Elimite, Acticin)
  - 10% crotamiton lotion (Eurax)



# Scabies Treatment Options (2)

- Oral anti-parasitic agent
  - Ivermectin (Mectizan or Stromectol)
  - Often prescribed but not currently approved by FDA for scabies treatment



# Scabicide Application

- Bathe or shower, dry skin thoroughly before applying scabicide
- Medication should be massaged into the skin from below the chin to the soles of the feet
- Fingernails & toenails should be clipped & scabicide applied under nails
- In infants, toddlers, the elderly & the immunocompromised, the head (forehead, temples and scalp) require application of scabicide



# Scabicide Application (2)

- Contact with the eyes and mouth should be avoided
- If scabicide is washed off during hand washing, toileting or perineal care, it must be reapplied to that area
- Apply medication to the skin and wash off after 8-14 hours (can be applied at bedtime and washed off in the morning)
- Itching may persist for 1-2 weeks following successful treatment





# Health Care Workers

## Symptomatic HCWs:

- Must report symptoms consistent with scabies to employer IMMEDIATELY
- Must be removed from work and referred to employee health
- Can return to work as soon as treatment is completed but should use gowns and gloves for direct patient care to prevent re-infestation



# Isolation & Environmental Control Measures

- Contact isolation during treatment period
- HCWs must wear gloves & long-sleeved gowns for hands-on contact. Wash hands after removal of gloves
- Washable items such as bed linens, towels & clothing, etc., used during the 72 hrs prior to treatment must be washed
- Keep laundry in a plastic bag inside patient's room, sorted & handled by gloved & gowned laundry worker, and washed in hot water for at least 10 minutes



# Isolation & Environmental Control Measures (2)

- Non-washable items **MUST** be placed in tightly sealed plastic bags for 7 days
- Change all bed linens, towels & clothes daily
- Disinfect multiple patient-used items (walking belts, wheelchairs, blood pressure cuffs, etc.)
- Vacuum mattresses, upholstered furniture & carpeting
- Routine disinfection procedures are adequate



# Guidelines

Los Angeles County Department of Public Health  
Acute Communicable Disease Control Program

Scabies Prevention and Control Guidelines  
Acute and Sub-Acute Care Facilities

July 2009 – Version 3



# Questions??



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